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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/620,376

07/17/2003

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EXAMINER

HODGE, ROBERT W

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

10/30/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/620,376

Applicant(s)

HAYASHI ET AL.

Examiner

Robert Hodge

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,8-14 and 17-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,8-14 and 17-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1, 3, 4 and 8-14 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 8 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regards to claim 1, it is unclear how the spacing portion can be formed outside of the sealant in the cell stacking direction, when the invention is clearly depicted in the figures as having a spacing portion located at an outer periphery or located outside of the sealant in a lateral direction, not in the direction of stacking the cells. As long as the prior art teaches a spacing portion located on the outer periphery such as is recited in claim 21 it will read on claim 1 as recited.

With regards to claims 3 and 8, it is unclear how "the surfaces facing each other" can exist when there is only one surface being recited in the claims. As long as the prior art teaches either the retaining portion or spacing portion formed on one surface of a component it will read on claims 3 and 8 as recited.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

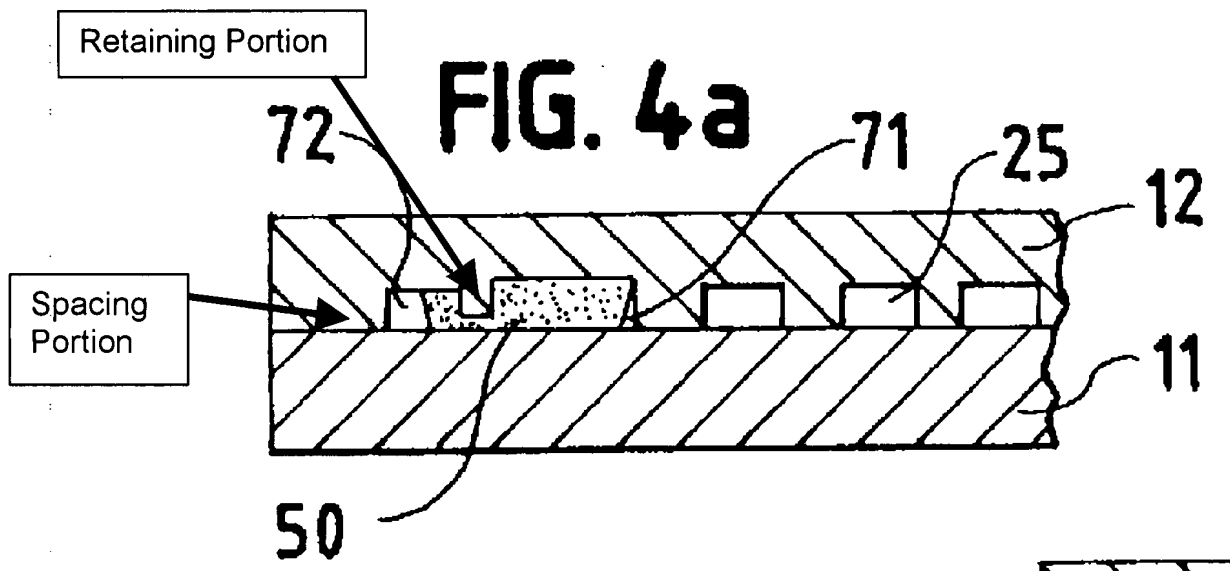
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3, 4, 8-14 and 17-21 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,080,503 hereinafter Schmid.

Schmid teaches solid polymer electrolyte fuel cell stacks (which as defined by applicants in the instant specification paragraph [0048] is a low temperature type fuel cell) comprising a plurality of components including but not limited to separators and electrolyte membranes with an adhesive material (inherently pressure sensitive) that is elastomeric and is selected for its specific compatibility of physical and chemical characteristics to be used in solid polymer electrolyte fuel cell stacks, said adhesive material being adhesive and interposed between the plurality of fuel cell components wherein a retaining portion and a spacing portion are formed on a surface of a separator plate (illustrated in figure 4a below);



wherein the spacing portion is formed along an outer periphery of the separator, wherein the adhesive material, the spacing portion and the retaining portion are all formed within the fuel cell unit, the stack further comprising manifolds that are formed inside the electrochemically active area and the adhesive material is formed along the outer edge (see column 6, lines 43-46) (since the spacing portion is clearly at an outer periphery of the entire fuel cell unit and the manifold is formed at an interior position such as the electrochemically active area, the spacing portion will clearly be formed outside of the manifold) (see figure 4a, column 1, lines 55-61, column 2, lines 30-33, column 5, lines 12-46, column 6, line 22 – column 8, line 67). Schmid further teaches that the adhesive material can be electrically insulating and is applied across the substantial entire contact surfaces of the separator plates (see column 5, lines 25-26 and line 34 and column 8, lines 35-36).

Schmid as described above teaches the claimed invention except for a spacing portion formed separately from the plurality of components and a retaining portion

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formed concave or convex toward the sealant. With regards to these features the Examiner as found no criticality of either of the above listed features in the instant specification. For Example in paragraph [0054] the first sentence describes that the spacing portion may be integrally or separately formed. There is no disclosure of whether one formation is more critical than the other and furthermore the discussion of separately forming is only mentioned in the first sentence of paragraph [0054] and is not even illustrated in the drawings. Also in paragraph [0056] it is stated that "Rather than being such a concave or convex portion, the retaining portion 33 may merely be a plane portion..." this too shows no criticality to the shape of the retaining portion. Therefore it would have been obvious to one having ordinary skill in the art to separately form the spacing portion of Schmid since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art (Nerwin v. Erlichman, 168 USPQ 177, 179) and it further would have been obvious to one having ordinary skill in the art to form the retaining portion in either a convex or concave shape since it has been held that a change in shape is generally recognized as being within the level of ordinary skill in the art (In re Dailey 149 USPQ 47, 50 (CCPA 1966) and Glue Co. v. Upton 97 US 3, 24 (USSC 1878)).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Hodge whose telephone number is (571) 272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RWH


JONATHAN CREPEAU
PRIMARY EXAMINER